

That which is claimed is:

1. A method, comprising:

receiving an input signal associated with a virtual touch;

5 outputting a request relating to a contact with a user-interface member coupled to a handheld communication device; and

providing a control signal associated with the contact to an actuator coupled to the handheld communication device, the control signal configured to cause the actuator to output a haptic effect associated with the virtual touch.

2. The method of claim 1 further comprising extracting a haptic code from the input 10 signal, the control signal being based at least in part on the haptic code.

3. The method of claim 1 wherein the user-interface member includes one of a key, a button, a key pad, a direction pad, a touch screen, a scroll wheel, a mini-joystick, a trackball, and a knob.

4. The method of claim 1 wherein the virtual touch is associated with one of a handshake, a high-five, a pat on the back, a pulse sensation, a heartbeat sensation, and a pet 15 purring sensation.

5. A method, comprising:

receiving a virtual touch indicator;

20 performing an initialization responsive to the virtual touch indicator on a handheld communication device;

receiving a virtual touch signal associated with the initialization; and

outputting a control signal associated with the virtual touch signal to an actuator 25 coupled to the handheld communication device.

6. The method of claim 5 wherein the actuator is configured to output a haptic effect to a user-interface member coupled to the handheld communication device.

7. The method of claim 6 wherein the user-interface member includes one of a key, a button, a key pad, a direction pad, a touch screen, a scroll wheel, a mini-joystick, a trackball, and a knob.

8. The method of claim 5 wherein the initialization includes outputting a request relating 30 to a contact with the user-interface member.

9. The method of claim 5 wherein the virtual touch signal is associated with a manipulation of a remote user-interface member.

10. A computer-readable medium on which is encoded program code, comprising:
program code for receiving an input signal associated with a virtual touch;

program code for outputting a request relating to a contact with a user-interface member coupled to a handheld communication device; and

program code for providing a control signal associated with the contact to an actuator coupled to the handheld communication device, the control signal configured to cause the actuator to output a haptic effect associated with virtual touch.

11. The computer-readable medium of claim 10 further comprising extracting a haptic code from the input signal, the control signal being based at least in part on the haptic code.

12. The computer-readable medium of claim 10 wherein the virtual touch is associated with one of a handshake, a high-five, a pat on the back, a pulse sensation, a heartbeat sensation, and a pet purring sensation..

13. A computer-readable medium on which is encoded program code, comprising:

program code for receiving a virtual touch indicator;

program code for performing an initialization responsive to the virtual touch indicator on a handheld communication device;

15 program code for receiving a virtual touch signal associated with the initialization; and

program code for outputting a control signal associated with the virtual touch signal to an actuator.

14. The computer-readable medium of claim 13 wherein the actuator is configured to output a haptic effect to a user-interface member coupled to the handheld communication device.

15. The computer-readable medium of claim 14 wherein the user-interface member includes one of a key, a button, a key pad, a direction pad, a touch screen, a scroll wheel, a mini-joystick, a trackball, and a knob.

25 16. The computer-readable medium of claim 13 wherein the initialization includes outputting a request relating to a contact with the user-interface member.

17. A data stream embodied in a carrier signal, carrying instructions to:

receive an input signal associated with a virtual touch;

output a request relating to a contact with a user-interface member coupled to a handheld communication device; and

provide a control signal associated with the contact to an actuator coupled to the handheld communication device, the control signal configured to cause the actuator to output a haptic effect associated with the virtual touch.

18. A data stream embodied in a carrier signal, carrying instructions to:
receive a virtual touch indicator;
perform an initialization responsive to the virtual touch indicator on a handheld
communication device;

5 receive a virtual touch signal associated with the initialization; and
output a control signal associated with the virtual touch signal to an actuator coupled
to the handheld communication device.

19. The apparatus, comprising:
a user-interface member coupled to a body;
10 a processor;
an actuator coupled to the body and in communication with the processor; and
a memory in communication with the processor, the memory storing program code
executable by the processor, including:
program code for receiving an input signal associated with a virtual touch;
15 program code for outputting a request relating to a contact with the user-
interface member; and
program code for providing a control signal associated with the contact to the
actuator, the control signal configured to cause the actuator to output a haptic effect
associated with the virtual touch.

20. The apparatus of claim 19 wherein the body is included in a handheld communication
device.

21. The apparatus of claim 20 wherein the handheld communication device includes one
of a cellular phone, a satellite phone, a cordless phone, a personal digital assistant, a pager, a
two-way radio, a portable computer, a game console controller, a personal gaming device,
25 and an MP3 player.

22. The apparatus of claim 20 wherein the user-interface member includes at least one of
a key, a button, a key pad, a direction pad, a touch screen, a scroll wheel, a mini-joystick, a
trackball, and a knob.

23. The apparatus of claim 19 wherein the virtual touch is associated with one of a
30 handshake, a high-five, a pat on the back, a pulse sensation, a heartbeat sensation, and a pet
purring sensation.

24. The apparatus, comprising:
a user-interface member;
a processor;

an actuator coupled to the a user-interface member and in communication with the processor; and

a memory in communication with the processor, the memory storing program code executable by the processor, including:

5 program code for receiving a virtual touch indicator;

program code for performing an initialization responsive to the virtual touch indicator;

program code for receiving a virtual touch signal associated with the initialization; and

10 program code for outputting a control signal associated with the virtual touch signal to the actuator.

25. The apparatus of claim 24 wherein the user-interface member is coupled to a handheld communication device.

15 26. The apparatus of claim 25 wherein the handheld communication device includes one of a cellular phone, a satellite phone, a cordless phone, a personal digital assistant, a pager, a two-way radio, a portable computer, a game console controller, a personal gaming device, and an MP3 player.

20 27. The apparatus of claim 24 wherein the user-interface member includes at least one of a key, a button, a key pad, a direction pad, a touch screen, a scroll wheel, a mini-joystick, a trackball, and a knob.

28. The apparatus of claim 24 wherein the virtual touch signal is associated with a manipulation of a remote user-interface member.